

KCC 4757 (K-C 16,831)  
PATENT

Remarks

Claims 1, 12, 20 and 22 are amended and claims 19, 21 and 29 are canceled herein. Claims 1-18, 20, 22-28 and 30-31 will be pending following entry of this amendment.

The following remarks are responsive to the final Office action dated March 9, 2004.

I. Response to Rejection of Claims under 35 USC §102.

Claim 1

Claim 1 is amended herein to generally include the recitation of claim 29 so as to clarify that the stiffness of the wetness indicator is increased upon absorbing a preselected amount of liquid because the absorbent body has an unrestrained volume upon absorbing the preselected amount of liquid that is substantially greater than the interior volume of the enclosure. Stated another way, upon absorbing the preselected amount of liquid the absorbent body wants to expand to an unrestrained volume. Because the enclosure has an interior volume that is substantially less than the unrestrained volume of the saturated absorbent body, the absorbent body pushes outward (e.g., applies an expansion pressure) to the enclosure while in return the enclosure limits expansion of the absorbent body to its unrestrained volume. As a result the stiffness of the wetness indicator increases upon absorption by the absorbent body of the preselected amount of liquid.

Specifically, claim 1 as amended recites a wetness indicator comprising:

a liquid permeable enclosure having an interior volume and

KCC 4757 (K-C 16,831)  
PATENT

a liquid absorbent body therein,

said liquid absorbent body absorbing liquid in the presence thereof and having an unrestrained volume upon absorption of a preselected amount of liquid,

said unrestrained volume of the absorbent body being substantially greater than the interior volume of the enclosure such that the absorbent body applies an expansion pressure to the enclosure upon absorption of said preselected amount of liquid,

said enclosure limiting expansion of the absorbent body so that the wetness indicator stiffens as liquid is absorbed,

said wetness indicator having a first stiffness when dry and a second stiffness greater than said first stiffness upon absorption of said preselected amount of liquid.

Claim 1 as now presented is submitted to be unanticipated by and patentable over the references of record, and in particular U.S. Patent No. 6,221,460 (Weber) and U.S. Patent No. 5,797,892 (Glaug et al.), in that whether considered alone or in combination the references fail to show or suggest a wetness indicator comprised of an enclosure and a liquid absorbent body having an unrestrained volume upon absorbing a preselected amount of liquid whereby the unrestrained volume of the liquid absorbent body is substantially greater than the volume of the enclosure so that upon expansion of the absorbent body within the enclosure the stiffness of the wetness indicator increases.

Applicants note that the final Office action did not reject claim 29 as being anticipated by Weber and it therefore presumed that the Office recognizes the failure of Weber to disclose the

KCC 4757 (K-C 16,831)  
PATENT

wetness indicator recited in amended claim 1. In any event, Weber discloses a liner (12) for use with personal care absorbent articles, such as diapers, designed to provide a path for increased air circulation and also to reduce the total surface area of the liner in contact with the infant's skin. Thus, the liner disclosed by Weber has a totally different purpose than a wetness indicator leading to substantially different structural properties than what is recited in amended claim 1. The liner (12) forms the air-circulation paths by providing a plurality of peaks (48) separated by channels (51) at spaced-apart intervals across the surface of the liner. With particular reference to Figs. 1-3 and 6a-e of Weber, the peaks (48) can be formed by creating pairs of inwardly facing folds (44) and (46) in a facing layer (40). In another embodiment (Figs. 8 and 9), the peaks can be formed by separate strips that are attached to the liner of the article.

Disposed within the peaks (48) is a liquid absorbing material (50) capable of absorbing body exudates or liquids in general. The absorbing material (50) may include components such as wood pulp, fluff, tissue, superabsorbent particles and fibers, odor reducing agents and antimicrobial agents.

Weber fails entirely to disclose or otherwise even suggest that the peaks (48) stiffen upon absorption by the absorbing material (50) of a preselected amount of liquid. While the final Office action cites column 7, lines 16-23 as disclosing such an increase in stiffness, the cited passage actually states only that the absorbent material (50) may include superabsorbent material that can absorb at least four times its weight. There

KCC 4757 (K-C 16,831)  
PATENT

is no disclosure whatsoever, either in the cited passage or elsewhere, that the absorption by the superabsorbent material stiffens the peaks (48). Even moreso, Weber fails to disclose or suggest that the absorbent material (50) has an unrestrained volume upon absorbing a preselected amount of liquid whereby the unrestrained volume is substantially greater than the interior volume of the peak as recited in amended claim 1. In fact, Weber fails altogether to disclose the relative sizing between the unrestrained saturated volume of the absorbent material and the interior volume of the peak formed by the facing layer.

The fact that the absorbent material (50) of Weber may include superabsorbent material is insufficient, by itself, or even combined with the fact that the facing layer has a limited volume, to render it necessary that the absorbent material will apply an expansion pressure to the facing layer to stiffen the peak. For example, the absorbent material may expand within the interior volume of the peak without expanding to the point at which an expansion pressure is applied by the absorbent material to the facing layer that forms the peak. See, e.g., Figs. 6a-e in which the absorbent material is substantially smaller than the interior volume of the peak.

Absent a disclosure by Weber of the relative expandability of the absorbent material to the interior volume of the peak, the Office has no basis for concluding that the absorbent material (50) within each peak necessarily has an unrestrained volume that is substantially greater than the volume of the peak and thus capable of sufficiently expanding to apply an expanding pressure to the facing layer to thereby stiffen each peak.

KCC 4757 (K-C 16,831)  
PATENT

For these reasons, claim 1 as amended herein is submitted to be unanticipated and patentable over Weber.

Glaug et al. disclose a toilet training aid in the form of a pad (80) that includes both a temperature change member (54) and a dimensional change member (82) disposed within a pocket formed by a wet sensation layer (56) (e.g., a topsheet) and a support layer (58). According to Glaug et al., the dimensional change member (82) (e.g., a compressed cellulose sponge) is capable of expanding (e.g., in height) upon wetting thereof up to about ten times the height of the dimensional change member when dry. However, Glaug et al. fail to disclose or otherwise suggest that the dimensional change member has an unrestrained volume upon absorbing liquid that is substantially greater than the volume of the pocket formed by the wetness sensation layer and the support layer.

In rejecting claim 29 in the final Office action (at page 7, fourth paragraph), the Office takes the position that Glaug discloses the unrestrained saturated volume of the absorbent body (presumably intended to refer to the dimensional change member) as being greater than the volume of the enclosure (presumably referring to the pocket formed by the wetness sensation layer and the support layer). In support, the Office cites column 8, lines 19-35 and column 16, lines 28-30 and 56-59.

Column 8, lines 19-35 of Glaug et al. recites as follows:

The support layer 58 may comprise any fabric, such as a nonwoven web or sheet of high wet strength tissue paper, a spunbonded, meltblown or bonded-carded

KCC 4757 (K-C 16,831)  
PATENT

web composed of synthetic polymer filaments, such as polypropylene, polyethylene, polyesters or the like, or a web of natural polymer filaments such as rayon or cotton. The support layer material may optionally be treated with a surfactant to aid in liquid transfer. In particular applications where it may be desirable not to permit urine to flow completely through the pad 50, for example where the pad is to be used with underpants or cloth garments, the support layer 58 may comprise a liquid impermeable material. Suitable liquid impermeable materials would include a web or sheet of plastic film such as polyethylene, polypropylene, polyvinyl chloride or similar material, or a nonwoven, fibrous web which has been suitably constructed and arranged to be liquid impermeable.

Where in the above passage does Glaug et al. reference the relative size of the unrestrained volume of the absorbent material (50) to the interior volume of the pocket formed by the wetness sensation layer and the support layer? Indeed, the above passage does not even describe or suggest the relative size of the pocket itself. Rather, the above passage only describes the different materials from which the support layer can be made and certainly does not support the position advanced by the Office.

Column 16, lines 28-30 and lines 56-59 respectively state as follows:

Suitable materials for use in the dimensional change member 82 include expandable foams, compressed cellulose sponges, or the like.

Still alternatively, the casing 52 may comprise a single wrap sheet 78 as illustrated in Fig. 4, which may be formed of a material like the wet sensation layer 56 or like the support layer 58.

KCC 4757 (K-C 16,831)  
PATENT

Again, neither of these paragraphs supports the position advanced by the Office, whether considered alone or in combination with the passage at column 8, lines 19-35. The first passage relied upon in column 16 is directed to the suitable materials from which the dimensional change member 82 can be made. However, this passages lacks any discussion or suggestion of the relative size of the unrestrained volume of the dimensional change member and the pocket in which the dimensional change member is located. The second column 16 passage is directed to an alternative way of making the pocket, i.e., using a single sheet instead of two different sheets. This also fails to describe the relationship between the unrestrained volume of the dimensional change member and the pocket formed by the single sheet.

Thus, Glaug et al. lack any disclosure of such a relationship. Nor is such a relationship inherent in the disclosure of Glaug. That is, there is no basis in fact and/or technical reasoning to reasonably support the determination that the recited relationship necessarily flows from the teachings of the applied prior art. MPEP '2112 citing *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient for inherency. See MPEP '2112, citing *In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993).

There is no drawing of the pad (80) of Glaug et al. with the dimensional change member in an expanded condition. While there is no doubt that the dimensional change member disclosed by Glaug et al. will expand upon wetting thereof, there is

KCC 4757 (K-C 16,831)  
PATENT

clearly no disclosure made by Glaug et al. as to the relative size of the interior volume of the pocket compared to the unrestrained volume of the dimensional change member when wet. Absent such information, the Office has no basis for maintaining that the dimensional change member necessarily has an unrestrained volume that is substantially greater than the volume of the pocket.

For these reasons, claim 1 is also submitted to be unanticipated by and patentable over Glaug et al.

The other references of record similarly fail to show or suggest all of the features recited in amended claim 1.

Claims 2-11 and 30 depend directly or indirectly from claim amended claim 1 and are submitted to be patentable over the references of record for the same reasons as claim 1.

## II. Rejection of Claims under 35 USC §103.

### Claim 25

Claim 25 is directed to an article for personal wear capable of alerting a wearer to the wearer's release of liquid body exudates. The article comprises a front region, a back region and a crotch region interconnecting the front and back regions and extending generally longitudinally therebetween, and a generally elongate wetness indicator positioned in the crotch region so as to come in contact with the liquid body exudates. The wetness indicator has a first stiffness when dry and a second stiffness greater than the first stiffness upon absorption of a preselected amount of the liquid body exudates. The wetness indicator is positioned transversely in the crotch



KCC 4757 (K-C 16,831)  
PATENT

region such that opposite ends of the wetness indicator provide a tactile sensation to the inner thighs of the wearer for alerting the wearer to the release of liquid body exudates.

Claim 25 is submitted to be nonobvious and patentable over the references of record, and in particular Glaug et al., in that whether considered alone or in combination the references fail to disclose or suggest an article having an elongate wetness indicator that becomes stiff when wet and extends transversely within the crotch region of the article to provide a tactile sensation to the inner thigh of the wearer.

When dry, the wetness indicator bends without perceptible resistance when subjected to force from the thighs. However, when wet, the wetness indicator becomes stiff, resisting the force applied by the thighs sufficiently to be tactilely perceived. The final Office action, recognizing that Glaug fails to disclose such a feature, takes the position that it would have been obvious to one skilled in the art to position the wetness indicator transversely in the crotch region because it involves a mere rearranging of parts of an invention requiring only routine skill in the art. Applicants respectfully disagree.

There are no per se rules of obviousness. *In re Ochiai*, 37 U.S.P.Q.2d 1127, 1133 (Fed. Cir. 1996). Moreover, it has been held that rejections based on choice of design are improper. *In re Bezombes*, 164 U.S.P.Q. 387, 391 (CCPA 1970). The Office must show some teaching or suggestion in the prior art that would motivate one skilled in the art to make the alleged choice of design. Such motivation is clearly lacking in this case. Glaug

KCC 4757 (K-C 16,831)  
PATENT

et al. disclose the dimensional change member (and pad in general) as extending longitudinally. If such a pad were stiffened in accordance with the present invention, they would have the undesirable tendency to urge the article containing the pad to straighten out toward the back and front of the crotch region, which can result in poor fit and leakage from the article.

The present invention solves this problem by extending an elongate wetness indicator transversely across within the crotch region (e.g., so that it does not extend to the front and back of the crotch). As a result, upon stiffening, the wetness indicator applies pressure against the wearer's inner thighs but otherwise does not negatively affect the fit and leakage retention properties of the article. Thus, applicants wetness indicator extending transversely within the crotch region is not a mere rearrangement of parts, but is an inventive feature intended to solve potential fit and leakage problems associated with prior designs. There is no motivation found anywhere in Glaug et al. for providing this unique formation and orientation of a wetness indicator in an article for personal wear capable of alerting a wearer to the wearer's release of liquid body exudates.

For these reasons, claim 25 is submitted to be nonobvious and patentable over the references of record.

Claims 26-28 depend directly or indirectly from claim 25 and are submitted to be patentable over the references of record for the same reasons as claim 25.

KCC 4757 (K-C 16,831)  
PATENT

Claim 28

Claim 28 depends indirectly from claim 25 and further recites that the wetness indicator has a liquid permeable enclosure and a liquid absorbent body therein with the absorbent body having an unrestrained saturation volume that is greater than the volume of the enclosure.

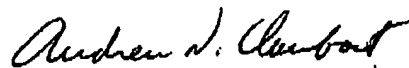
Claim 28 is further submitted to be patentable over the references of record for the same reasons as claim 1 discussed previously. That is, Glaug et al. fail to disclose or suggest that the dimensional change member (82) therein has an unrestrained saturation volume greater than the volume of the pocket formed by the wetness sensation layer and the support layer.

KCC 4757 (K-C 16,831)  
PATENT

Conclusion

In view of the foregoing, favorable consideration and allowance of claims 1-18, 20, 22-28 and 30-31 as now presented is respectively requested.

Respectfully submitted,



Andrew N. Claerbout, Reg. No. 50,202  
SENNIGER, POWERS, LEAVITT & ROEDEL  
One Metropolitan Square, 16th Floor  
St. Louis, Missouri 63102  
(314) 231-5400

ANC/clh

Via Facsimile - 703-872-9306